

REMARKS

In the Office Action, the Examiner indicated that claims 1-10, 21-52, 66-79 and 81-83 have been withdrawn from consideration. The Examiner indicated that the applicant inadvertently failed to show the withdrawn status of these claims in the previously filed Amendment. In the present Amendment, these claims have been listed as withdrawn to meet the guidelines set forth in 37 CFR §1.121.

In the Office Action, the Examiner indicated that Figures 1A and 1B should be designated by a legend, such as -- Prior Art --, because only that which is old is illustrated. As an example, the Examiner pointed to paragraph [0011] of the present specification and the element 1.04. By the present Amendment, the reference number 1.04 has been removed from paragraph [0011] of the specification.

Figures 1A and 1B are used to generally describe the present invention and refer to a system 1.02 for managing the delivery of a commodity. The system 1.02 is not meant to refer to a prior art system, but instead refers to the system of the present invention. Thus, the Prior Art legend is not proper for either Figures 1A or 1B.

Reference numeral 1.04 refers to the customer site, reference numeral 1.06 refers to the utility and reference numeral 1.18 refers to a wired network. By the present Amendment, Figure 1B has been amended to eliminate the reference character 1.24, which referred to a service provider.

The Examiner objected to the drawings because it was the Examiner's belief that the reference characters 1.04 and 1.06 are both used to designate a customer site. By the present Amendment, paragraph [0059] of the application has been amended to indicate that only reference numeral 1.04 refers to a customer site. Reference numeral 1.06 refers to a utility.

The Examiner objected to Figure 3A as not including elements 3.06E and 3.06F. By the present Amendment, Figure 3A has been amended to include these two reference numerals.

In the Office Action, the drawings were objected to as failing to show energy being supplied from an energy provider through a distribution network, as included in claims 11 and 53. By the present Amendment, claims 11 and 53 have been amended to eliminate the requirement that energy is supplied by the energy provider through a distribution network. Thus, the drawings now show every feature of the invention as claimed. Although the claims have been amended, it is the applicant's belief that a distribution network does not need to be shown in the drawings since an energy distribution network for a utility is well known in the art and, as such, does not need to be included in the drawings.

In preparing this response, the applicant has reviewed the specification and drawings to identify additional drawing deficiencies other than those identified by the Examiner. Any deficiencies identified have been corrected in the enclosed corrected drawing pages.

In the Office Action, the Abstract of the Disclosure was objected to because it was not clear in the Examiner's opinion. By the present Amendment, the Abstract has been amended to clarify the language identified by the Examiner.

In the Office Action, the Examiner objected to the disclosure because of several informalities in paragraphs [00179] and [00254]. By the present Amendment, these informalities have been amended.

The Examiner objected to the specification under 35 USC §112, first paragraph, based upon terms that are not clear, concise and exact. In preparing the present Amendment, the specification has been reviewed carefully to comply with 35 USC §112, first paragraph.

In discussing this objection, the Examiner stated that Figures 1A and 1B were the applicant's admitted prior art. The applicant disagrees with such finding by the Examiner. The subject matter shown in Figures 1A and 1B does not show the prior art, but instead shows the applicant's invention in a broad sense.

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In the Office Action, the Examiner objected to the Amendment filed on October 12, 2004 as including an improper heading. As the Examiner correctly indicated, the claims presented in the Amendment of October 12, 2004 were the correct claims for prosecution. Further, claim 20 has been amended along the lines suggested by the Examiner.

In the Office Action, claims 16-20, 56, 61-65 and 80 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. By the present Amendment, the claims have been amended to clarify the objectionable language identified by the Examiner, such that the rejection under §112 is believed to have been overcome.

In the Office Action, claims 11-14, 17-19, 53, 54, 57-59 and 61-65 were rejected under 35 USC §102(b) as being anticipated by the Ehlers U.S. Patent No. 5,924,486. Claims 15, 16, 20, 55, 56, 60 and 80 were rejected under 35 USC §103(a) as being unpatentable over the Ehlers '486 reference in view of the Axelrod U.S. Patent No. 3,181,791.

Reconsideration of the above claim rejections in view of the foregoing claim amendments and the following arguments for allowance is respectfully requested.

Claims 11-16, 20

By the present Amendment, independent claim 11 has been amended to indicate that the thermostatic device is coupled to the energy provider to receive a current characteristic of the energy. The thermostatic device receives an input from a user, including a temperature setpoint and a selection of one of a plurality of comfort level scenarios. Based upon this information, the thermostatic device determines an effective setpoint as a function of the temperature setpoint and the sensed humidity. The thermostatic device controls the temperature and environmental management system to maintain air temperature at the site within a deadband defined by the effective setpoint

and an offset. The thermostatic device determined the offset based on the user selected comfort level scenario and the current characteristic of energy.

As required by claim 11, the system receives a temperature setpoint and an comfort level scenario from the user. Based on the temperature setpoint from the user and a sensed humidity, the thermostatic device determines an effective setpoint. As described in the specification, the effective setpoint varies from the temperature setpoint based upon the sensed humidity. Once the effective setpoint has been determined, the thermostatic device controls the temperature and environment management system to maintain air temperature within a deadband defined by the effective setpoint and an offset. The offset is determined based upon the comfort level scenario received from the user and the current characteristic of energy. When the user is selecting the comfort level scenario, different levels can be selected based on the user's willingness to pay for energy. As the characteristic of the energy, such as cost, changes, the thermostatic device can calculate a varying offset based on the selected comfort level scenario. The offset is thus based on the selected comfort level scenario and the current characteristic of energy. In this manner, the thermostatic device is able to control the temperature based upon the temperature setpoint, the sensed humidity and the characteristic of energy.

In rejecting original independent claim 11, the Examiner cited the Ehlers '486 reference. In citing the Ehlers '486 reference, the Examiner stated that the Ehlers '486 patent taught a thermostatic device for determining an effective setpoint as a function of the temperature setpoint and the sensed humidity. The applicant hereby disagrees with such finding by the Examiner.

In the Ehlers '486 reference, a deadband range around the temperature setpoint depends only upon the cost of energy. Thus, as the cost of energy increases, the deadband increases to stabilize the cost of heating or cooling. The Ehlers '486 reference does not teach or suggest adjusting the thermostat setpoint based upon the sensed humidity. In the specification of the Ehlers '486 reference, a humidity sensor is shown;

however, the patent specification does not teach or suggest utilizing the sensed humidity to determine an effective setpoint.

Further, as amended, independent claim 11 requires the step of allowing the user to select a comfort level scenario based on the willingness to pay for energy at the expense of comfort. Based upon the current characteristic of energy, the thermostatic device calculates an offset from the effective setpoint and operates the system to maintain a comfort level balancing temperature and humidity within the deadband defined by the effective setpoint and the offset. The offset is a function of both the user selected comfort level scenario and the current characteristic of energy. Thus, as the characteristic of energy, such as cost, increases, the device varies the offset an amount determined by the selected scenario using a combination of temperature and humidity to aid in reducing the overall energy consumption. This feature is not taught or suggested, nor rendered obvious, by the Ehlers '486 reference cited by the Examiner.

In the Office Action, the Examiner also relied upon the Axelrod '791 reference in combination with the Ehlers '486 reference to reject several of the claims dependent upon claim 11. The Axelrod '791 reference, when combined with the Ehlers '486 reference, does not teach or suggest, nor render obvious, the subject matter of amended independent claim 11. Specifically, the Axelrod reference does not teach or suggest the use of temperature and humidity to create an effective setpoint and controlling the temperature based on the effective setpoint and an offset determined based upon the cost of energy and a user selected acceptable scenario.

Based upon the above arguments for allowance, claim 11 is believed to be in condition for allowance and such action is respectfully requested.

Claims 12-16 and 20 depend directly or indirectly from claim 11 and are thus believed to be allowable based upon the above arguments for allowance, as well as in view of the subject matter of each claim.

Claims 53-65

In the Office Action, independent claim 53 was also rejected based upon the Ehlers '486 reference. By the present Amendment, method claim 53 has been amended generally along the same lines as system claim 11. Specifically, claim 53 has been amended to indicate that an input is received from a user that includes a temperature setpoint and a comfort level scenario. The system determines an effective setpoint as a function of the temperature setpoint and the sensed humidity while also determining an offset based on the comfort level scenario and the current characteristic of energy. Once the effective setpoint and the offset are calculated, the system controls the temperature at the site within a deadband defined by the effective setpoint and the offset. Thus, the temperature is controlled based upon the temperature setpoint, the sensed humidity and the current characteristic of energy.

As discussed above in the arguments for allowance of claim 11, the Ehlers '486 reference cited by the Examiner does not teach or suggest, nor render obvious, the control of temperature based upon both humidity and the current characteristic of energy. Further, the combination of the Axelrod '791 reference with the Ehlers '486 reference does not teach or suggest, nor render obvious, the subject matter of amended independent claim 53.

Based upon the above arguments, claim 53 is believed to be in condition for allowance.

Claims 54-56 and 60-65 depend directly or indirectly from claim 53 and are thus believed to be allowable based upon the above arguments for allowance, as well as in view of the subject matter of each claim.

New Claims

New claims 84-103 have been added to the present application to round out the scope of protection to which the applicant is believed to be entitled. The new claims do not add any new subject matter and thus should be included in the application. New

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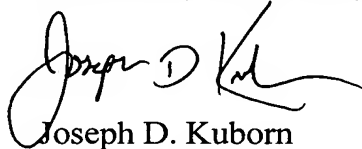
claims 84-101 depend directly or indirectly from independent claims 11 or 53 and are thus believed to be in condition for allowance.

Conclusion

Based upon the above amendment and the arguments for allowance, claims 11-16, 20, 53-56, 60-65 and 84-103 are believed to be in condition for allowance. The Examiner is invited to contact the applicant's undersigned attorney to further facilitate prosecution of the present application.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

A handwritten signature in black ink, appearing to read "Joseph D. Kuborn", with a stylized flourish extending to the right.

Joseph D. Kuborn
Reg. No. 40,689

100 East Wisconsin Avenue, Suite 1100
Milwaukee, Wisconsin 53202
Telephone No. (414) 271-7590
Attorney Docket No.: 4834-00010

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Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1B and 3A. These sheets replace the original sheets including Figures 1B and 3A.

Attachment: Replacement Sheets